

Determinants that Drive the Behavioural Intention of Employees in the IT industry to Use CI/CD Framework: A Study based on Sri Lankan IT Companies

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Continuous Integration and Continuous Delivery (CI/CD) is an Agile-based software development methodology becoming increasingly popular in the software development industry due to its ability to automate the software delivery process, reduce the time to market, and enhance software quality. However, despite the growing interest in CI/CD adoption, many organizations have not achieved full success in implementing and utilizing the CI/CD workflow. To address this gap, this study aimed to identify the factors that drive the behavioural intention of IT employees to use the CI/CD workflow: based on the Sri Lankan context. A systematic literature review using the PRISMA framework identified the Technology Acceptance Model and the Unified Theory of Acceptance and Use of Technology models as the most widely used and accepted models for understanding technology adoption. Therefore, TAM, UTAUT and past literature were used to develop the conceptual framework. The variables in this research model were measured through questionnaires with nominal and five- point Likert scales and close-ended questions, which were completed by the IT employees in Sri Lanka. Data cleaning and demographic data analysis were conducted using IBM SPSS 21, and preliminary data analysis was performed using PLS-SEM (SmartPLS 4). The study found that Performance expectancy is the most significant factor determining IT employees' behavioural intention to use CI/CD workflow. Therefore, the study concluded that organizations and management should focus more on enhancing employees' performance expectancy to adopt CI/CD workflow successfully.

Keywords: *behavioural intention, continuous delivery, continuous integration, technology acceptance*